Jeffrey H. Blum
Senior Vice President & Deputy General Counsel
Jeffrey.Blum@dish.com
(202) 293-0981

October 10, 2012

EX PARTE PRESENTATION

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Ex Parte Presentation in WT Docket No. 12-70, *Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*; ET Docket No. 10-142, *Fixed and Mobile Services in the Mobile Satellite Service Bands at 1525-1559 MHz and 1626.5-1660.5 MHz, 1610-1626.5 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz*; and WT Docket No. 04-356, *Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands*

Dear Ms. Dortch:

Pursuant to Section 1.1206 of the Commission's rules, 47 C.F.R. § 1.1206, DISH Network Corporation ("DISH") submits this response to the recent ex parte letters submitted in the above-referenced dockets, dated October 2, 2012, submitted by Sprint Nextel Corporation ("Sprint") and its outside counsel (together, the "Letters").[1] In these Letters, Sprint backs away from its previous advocacy for a shift in the AWS-4 uplink spectrum, but persists in attempting to delay the AWS-4 proceeding with inaccurate claims.

First, DISH is pleased that Sprint has abandoned its push for an unnecessary and ill-advised upward shift of the AWS-4 uplink spectrum to 2005-2025 MHz.[2] As DISH has explained, such

[1] Letter from Marc S. Martin, Counsel for Sprint Nextel Corporation, to Marlene H. Dortch, Secretary, FCC, WT Dkt. Nos. 12-70, 04-356, ET Dkt. No. 10-142 (Oct. 2, 2012) ("Sprint October 2 Ex Parte"); Letter from Stephen Bye and Lawrence Krevor, Sprint Nextel Corporation, to Chairman Genachowski, FCC, WT Dkt. Nos. 12-70, 04-356, ET Dkt. No. 10-142 (Oct. 2, 2012) ("Sprint Letter to Chairman Genachowski").

[2] *Compare* Sprint October 2 Ex Parte at 3 (declining to "opine" on interference concerns above 2025 MHz as they are "implicated only if the Commission adopts an alternative band plan"), *with* Letter from Lawrence R. Krevor, Sprint Nextel Corporation, to Marlene H. Dortch, Secretary, FCC, WT Dkt. Nos. 12-70, 04-356, ET Dkt. No. 10-142, at 2 (Sept. 17, 2012) (arguing that an upward shift "would allow the Commission to auction the 1915-1920 MHz and 1995-2005 MHz blocks as a unit, which would provide more PCS spectrum for auction, increase

a shift would re-start the standards-setting process under the 3rd Generation Partnership Project ("3GPP"), jeopardizing mobile broadband service in the AWS-4 band, and creating a host of new technical issues with operations above 2025 MHz.[3]

Second, contrary to Sprint's assertions, and as DISH has already made clear, DISH's recent "proposals" to 3GPP are nothing more than maintenance work in the band. Band 23 was finalized by 3GPP in June 2011 after extensive negotiations between vendors and operators, including Sprint. This process included agreement on the necessary protection levels between Band 23 and Band 25. Curiously, Sprint argues that DISH's "proposals" would increase the out-of-band-emission ("OOBE") levels permitted from Band 23 devices into Band 25, and specifically cites to two 3GPP submissions by DISH.[4] But neither of these submissions has anything to do with new emissions limits. The first cited submission relates to establishing 15 and 20 MHz channels in the band to accommodate a single AWS-4 operator.[5] There is nothing about establishing these wider channels that implicates OOBE limits. DISH will continue to meet the agreed upon coexistence requirements and regulatory requirements when using these wider channels. The second cited submission concerns carrier aggregation with the 700 MHz band, which (again) has no bearing on Band 23 emissions into Band 25.[6]

Third, Sprint misrepresents the submissions to 3GPP by Nokia and Nokia Siemens Networks,[7] Qualcomm,[8] and DISH[9] regarding spurious emissions from Band 23 devices into the G Block.

---

the amount of highly-valued downlink spectrum available to bidders, and, as a consequence, produce more auction revenue for the United States than auctioning the current H Block alone").

[3] *See* Letter from Jeffrey H. Blum, DISH Network Corporation, to Marlene H. Dortch, Secretary, FCC, WT Dkt. Nos. 12-70, 04-356, ET Dkt. No. 10-142, at 1 (Aug. 28, 2012) (noting that shifting the AWS-4 uplink would "expose AWS-4 base stations to potential interference from federal and Broadcast Auxiliary Station ('BAS') operations above 2025 MHz").

[4] Sprint October 2 Ex Parte at 2 & n.6.

[5] *See* DISH Network Corporation, Submission to the 3GPP, No. R4-124812 (Aug. 2012), *at* http://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_64/Docs/R4-124812.zip.

[6] *See* DISH Network Corporation, Submission to the 3GPP, No. R4-124059 (Aug. 2012), *at* http://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_64/Docs/R4-124059.zip.

[7] *See* Nokia & Nokia Siemens Networks, Submission to the 3GPP, No. R4-116063 (Nov. 2011), *at* http://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_61/Docs/r4-116063.zip ("Nokia/NSN Submission").

[8] *See* Qualcomm Incorporated, Submission to the 3GPP, No. R4-115803 (Nov. 2011), *at* http://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_61/Docs/R4-115803.zip ("Qualcomm Submission").

[9] *See* DISH Network Corporation, Submission to the 3GPP, No. R4-115726 (Nov. 2011), *at* http://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_61/Docs/R4-115726.zip ("DISH November 2011 Submission").

In establishing the band, 3GPP discussions resulted in the following agreed limits on spurious emissions from Band 23 devices to meet a -40 dBm/MHz protection level at 1995 MHz:[10]

Spurious Emissions (TS 36.101)							
E-ULTRA Band	*Protected Band*	*Frequency Range (MHz)*			*Max Level (dBm)*	*MBW (MHz)*	*Note*
23	*E-UTRA Band 4, 5, 10, 12, 13, 14, 17, 23, 24, 41*	F_{DL_low}	-	F_{DL_high}	*-50*	*1*	
	E-UTRA Band 2	F_{DL_low}	-	F_{DL_high}	*-50*	*1*	*14, 15*
	Frequency range	*1998*	-	*1999*	*-21*	*1*	*14, 15*
	Frequency range	*1997*	-	*1998*	*-27*	*1*	*14, 15*
	Frequency range	*1996*	-	*1997*	*-32*	*1*	*14, 15*
	Frequency range	*1995*	-	*1996*	*-37*	*1*	*14, 15*

Missing from the agreed limits were the regulatory requirements for emissions between 1990 and 1995 MHz (the G Block). Nokia, however, noted that Commission rules require an OOBE limit of 70+10*log(P) dB below 1995 MHz, corresponding to a spurious emissions limit of -40 dBm/MHz below 1995.[11] As a housekeeping matter, Nokia[12] and Qualcomm[13] proposed adding a new row to the chart for Band 23 to address that existing regulatory requirement for the 1990-1995 MHz range:

23	*Frequency range*	*1990*	-	*1995*	*-40*	*1*	*14, 15*

DISH agreed with Nokia and Qualcomm and subsequently made its own submission in support.[14] The "new row" does nothing more than make explicit certain limits codified in the Commission's rules that were already implicit in the Band 23 specifications.

Sprint misleadingly avers that this "proposal" "offers diminished interference protection to the G Block, as compared to TS 36.101, and DISH has offered no technical support to the contrary."[15] This is false. Sprint is wrong when it states that the existing TS 36.101 limits of -37 dBm/MHz at 1995-1996 MHz and -50 dBm/MHz at 1990 MHz correspond to some interpolated protection

[10] *See* Letter from Jeffrey H. Blum, DISH Network Corporation, to Marlene H. Dortch, Secretary, FCC, WT Dkt. Nos. 12-70 and 04-356 and ET Dkt. No. 10-142, Appendix at 2-4 (Sept. 24, 2012) ("DISH September 24 Ex Parte").

[11] *See* Nokia/Nokia Siemens Networks Submission to the 3GPP, Band 23 UE Coexistence Requirements with Band 25, R4-116064 (Nov. 2011), *at* http://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_61/Docs/R4-116064.zip (citing 47 C.F.R. § 25.252(c)(1)).

[12] *See* Nokia/NSN Submission at 4.

[13] *See* Qualcomm Submission at 4.

[14] *See* DISH November 2011 Submission at 4.

[15] Sprint Letter to Chairman Genachowski at 2.

between these two limits in the 1990-1995 MHz band.[16] Moreover, Sprint has offered no evidence that it has submitted any analysis to 3GPP justifying a linear interpolation requirement of Band 23 emissions between 1995 MHz and 1990 MHz. And Sprint has gone even further with 3GPP, by proposing that the -50 dBm/MHz value be used uniformly across the 1990-1995 MHz band,[17] a protection level that is substantially more stringent than the regulatory requirement in the Commission's rules for a spurious emissions limit of -40 dBm/MHz below 1995 MHz.

The inconsistency between Sprint's position before the Commission and its submissions to 3GPP is unsurprising, because neither position is supported by the facts. The "new row" proposed by Nokia, Qualcomm, and DISH *actually enhances* protection to Sprint under TS 36.101, because absent its inclusion, Sprint would enjoy *no protection* with respect to OOBE (under 3GPP specifications, at least) from AWS-4 devices in the G Block.

Fourth, it is Sprint, and not DISH, who is delaying the 3GPP process. The 70+10*log(P) dB limit below 1995 MHz currently codified in the Commission's rules is 10 dB in excess of what the Commission has established or proposed to establish for similarly situated bands.[18] Nevertheless, Sprint is using the consensus process of 3GPP to, in effect, change the otherwise applicable Commission standard by arguing for what translates into a stricter OOBE limit of 80+10*log(P) dB (-50 dBm/MHz for spurious emissions) for AWS-4 devices into the G Block. Given the adequacy of the Commission's limits, Sprint's support for more restrictive measures serves no purpose other than delay. Indeed, the maintenance item for device emissions corrections, which has been discussed at 3GPP meetings since late last year,[19] along with proposals submitted by DISH earlier this year, would have been laid to rest at last month's 3GPP meetings were it not for Sprint's tactics.

---

[16] *See id.* (asserting that the current 3GPP standard "will result in out-of-band emissions protection of -40 dBm or greater at the PCS G Block edge at 1995 MHz, increasing to -50 dBm at 1990 MHz").

[17] *See* Sprint Nextel Corporation, Submission to the 3GPP, No. R4-125778, at 1 (Oct. 2012), *at* http://www.3gpp.org/ftp/tsg_ran/wg4_radio/TSGR4_64bis/Docs/r4-125778.zip; Sprint Nextel Corporation, Submission to the 3GPP, No. R4-125054 (Oct. 2012), *at* http://www.3gpp.org/ftp/tsg_ran/wg4_radio/TSGR4_64bis/Docs/r4-125054.zip. This approach to the 15 and 20 MHz channel bandwidths would mark a stark departure from the 3GPP approach to all other channel bandwidths in Band 23, which explicitly used a -40 dBm/MHz limit in the Additional Maximum Power Reduction ("A-MPR") calculations for spurious emissions into the G Block.

[18] *See, e.g.*, Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band; Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands, *Further Notice of Proposed Rulemaking*, 23 FCC Rcd 9859, 9860 ¶ 3 (2008) (proposing OOBE limits of 60+10*log(P) dB).

[19] *See* Nokia/NSN Submission at 1 (submitted Nov. 14, 2011); Qualcomm Submission at 1 (same).

Fifth, Sprint's reliance on Sections 25.252(c)(3) and 25.255 of the Commission's Ancillary Terrestrial Component ("ATC") rules is misplaced. These ATC era rules will no longer be relevant for a terrestrial band licensed on a primary basis by the Commission.[20] Were the Commission to require AWS-4 operators to resolve any and all interference claims to the benefit of the other service, regardless of whether operational limits were observed, then AWS-4 would be nothing more than a secondary service under the Commission's rules. This is not what the Commission envisions for this band, and would not be in the interest of expanded mobile broadband capability. In any event, Sprint cannot plausibly invoke these rules, which go to case-by-case coordination, to argue for a more stringent limit that would apply *a priori* in all cases. All that is necessary is good faith coordination between two primary services.

Finally, Sprint acts as if the use and future of the H Block is known. But by Sprint's own admission, use of the H Block uplink at 1915-1920 MHz may cause interference to adjacent downlink operations in Sprint's own PCS bands.[21] And last Friday, AT&T stated, among other things, that "[b]ecause of the serious interference concerns and the significant operational challenges involved, the H Block should not be used for commercial mobile service."[22] Many technical issues with the H Block thus remain to be resolved.[23] Reasonable emissions limits as proposed by the Commission and supported by DISH are more than adequate to preserve the potential for future service from the H Block while moving AWS-4 service forward in the present.

---

[20] *See* Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands, *Notice of Proposed Rulemaking*, 27 FCC Rcd. 3561, 3593 ¶ 101 (2012) (noting that "in the 2 GHz Band Co-Allocation Order, the Commission added co-primary Fixed and Mobile allocations, along with the pre-existing MSS allocation, in the 2 GHz band, expressly lay[ing] the foundation for more flexible use of the band [and] . . . promoting investment in the development of new services and additional innovative technologies") (internal quotation marks and citations omitted).

[21] *See* Comments of Sprint Nextel Corporation, ET Dkt. No. 10-142, WT Dkt Nos. 04-356 and 07-195, at 4 (July 8, 2011). Sprint explained that "H Block uplink operations at 1915-1920 MHz would pose a serious interference threat to G Block transmissions and other PCS operations. At a minimum, new 1917-1920 MHz users would need to be subject to restrictive transmitter power and OOBE limits to protect the millions of existing PCS devices operating in the 1930-1990 MHz band from harmful intermodulation interference." *Id.*

[22] *See* Letter from Joan Marsh, Vice President – Federal Regulatory, AT&T, Inc. to Marlene H. Dortch, Secretary, FCC, WT Dkt. Nos. 12-70 and 04-356 and ET Dkt. No. 10-142, at 3 (Oct. 5, 2012).

[23] *See* DISH September 24 Ex Parte, at Appendix.

DISH urges the Commission to move expeditiously to adopt final AWS-4 rules based on the existing band plan and interference protections consistent with existing 2 GHz requirements and 3GPP agreements.

Respectfully submitted,

/s/ Jeffrey H. Blum
Jeffrey H. Blum